

In the Claims:

1. (Currently Amended) In a wireless communication system comprising at least two [[B]]base [[S]]stations, at least one [[S]]switch in communication with the [[B]]base [[S]]stations, and at least one mobile unit, a method of handing off the mobile unit from a [[B]]base [[S]]station communicating with the mobile unit and a neighboring [[B]]base [[S]]station, comprising:

smoothing a plurality of signals received from a handset by a plurality of [[B]]base [[S]]stations;

comparing the signals with one another; and

selecting a [[B]]base [[S]]station for handoff based on signal quality.

2. (Currently Amended) Method, according to claim 1, wherein:

the signals are compared by computing an average signal quality received from a given [[B]]base [[S]]station over a time interval encompassing subsequent signals from the given [[B]]base [[S]]station.

3. (Currently Amended) Method, according to claim 1, further comprising:

comparing the signals only during times in which the signal was received by more than one [[B]]base [[S]]station.

4. (Original) Method, according to claim 1, wherein the signal quality is based on a measurement selected from the group consisting of energy level, signal-to-noise ratio (SNR), packet loss ratio, and bit error rate (BER).

5. (Currently Amended) Method, according to claim 1, wherein:

the [[B]]base [[S]]stations communicate with the mobile units in hops;

the method further comprising:

prior to comparing the signals, aligning in time the measurements of the same hops.

6. (Original) Method, according to claim 5, wherein:

the measurements are averaged over a number (X) of hops

A) 7. (Original) Method, according to claim 1, wherein the mobile unit is a device selected from the group consisting of:

telephone handset, standard cordless telephone handset, cellular telephone handset, personal data device, personal digital assistant (PDA), computer, laptop computer, e-mail server, a device utilizing point-to-point protocol (PPP) to the Internet via a central remote access server, a headset, a personal server, a wearable computer, a wireless camera, and a mobile music player.

8. (Currently Amended) Method, according to claim 1, further comprising:

providing communication links between the [[B]]base [[S]]stations, wherein the communication links between the [[B]]base [[S]]stations are selected from the group consisting of RF links and land lines; and

transferring connection status information and synchronization information between the [[B]]base [[S]]stations over the communications links.

9. (Currently Amended) Method, according to claim 1, wherein:

the [[B]]base [[S]]stations and the [[S]]switch are connected via a wired or wireless local area network (LAN).

10. (Original) Method, according to claim 1, wherein:

the wireless communication system comprises a wireless private branch exchange (WPBX) handling calls from mobile units comprising handsets.

Al 11. (Currently Amended) In a wireless communication system comprising at least two [[B]]base [[S]]stations and at least one [[S]]switch in communication with the [[B]]base [[S]]stations, a method of performing handoff of a session from a [[B]]base [[S]]station connected with a mobile unit to a neighboring [[B]]base [[S]]station, wherein an instance of a low-level communications protocol is running at the [[B]]base [[S]]station connected with the mobile unit, comprising:

at the [[S]]switch, determining when to perform handoff to a selected one of the neighboring [[B]]base [[S]]stations;

at the selected one of the neighboring [[B]]base [[S]]stations, creating a copy of the low-level communications protocol, including at least a synchronized time of day (TOD) parameter;

from the [[S]]switch, sending a command to stop communication with the mobile unit at a specified TOD to the [[B]]base [[S]]station connected with the mobile unit and sending a command to start communication with the mobile unit at the specified TOD to the selected one of the neighboring [[B]]base [[S]]stations; and

updating session status tables in the [[S]]switch and in the [[B]]base [[S]]stations.

12. (Original) Method, according to claim 11, wherein:

the session is selected from the group consisting of phone call and data link.

13. (Currently Amended) Method, according to claim 11, wherein:

AI the low-level communications protocol comprises procedures selected from the group consisting of control and modulation of RF signals transmitted to the mobile unit by the [[B]]base [[S]]station, frequency hopping, error correction, accurate time synchronization, device address, rough [[T]]time [[O]]of [[D]]day (TOD), voice channel allocation, forward error correction parameters, encryption keys, authentication keys, voice coding, device addressing, address of a parked mobile unit, definition of an asynchronous data link, and data FIFOs.

14. (Original) Method, according to claim 11, wherein:

the mobile unit is equipped with a short-range wireless communication transmitter/receiver.

15. (Original) Method, according to claim 11, wherein the mobile unit is a device selected from the group consisting of:

telephone handset, standard cordless telephone handset, cellular telephone handset, personal data device, personal digital assistant (PDA), computer, laptop computer, e-mail server, a device utilizing point-to-point protocol (PPP) to the Internet via a central remote access server, a headset, a personal server, a wearable computer, a wireless camera, and a mobile music player.

16. (Currently Amended) Method, according to claim 11, further comprising:

providing communication links between the [[B]]base [[S]]stations, wherein the communication links between the [[B]]base [[S]]stations are selected from the group consisting of RF links and land lines; and

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transferring connection status information and synchronization information between the [[B]]base [[S]]stations over the communications links.

17. (Currently Amended) Method, according to claim 11, wherein:

the [[B]]base [[S]]stations and the [[S]]switch are connected via a wired or wireless local area network (LAN).

18. (Original) Method, according to claim 11, wherein:

the wireless communication system comprises a wireless private branch exchange (WPBX) handling calls from mobile units comprising handsets.
